

PRELIMINARY AMENDMENT
Attorney Docket Q65149

IN THE ABSTRACT:

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Abstract

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The invention relates to a method for coating shaped bodies made of a superconducting material based on (Y/SE)BaCuO. The invention is characterized in that a coating consisting of a coating material is applied to at least one part of a surface of the shaped body, whereby the coating material at least partially melts at a lower temperature than that of the material of the shaped body and/or is flowable at a lower temperature than that of said material. The shaped body with the applied coating material is heated to a temperature at which the material of the shaped body does not yet melt and/or is not yet flowable, however at which the coating material is at least partially melted thereon and/or is in a flowable state. In addition, at least one part of the area of the shaped body located near the surface is modified at said temperature and/or during a successive cooling, and the shaped body treated in such a manner is enriched with oxygen during cooling and/or during a successive heat treatment, whereby the modification contributes to the increase in remanent induction and/or to the critical current density of the shaped body enriched with oxygen. The invention also relates to a shaped body made of a superconducting material which is based on (Y/SE)BaCuO and which can be obtained by using the above-mentioned method. Said superconducting material contains at least one rare-earth element selected from the group of Y, La, Ce, Pr, Nd, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu and comprises a maximal value of remanent induction of at least 1100 mT at 77K and 0 T.